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Problems in Statistical Data of Agricultural Population in the United States in 1910 – 1970

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Abstract According to the data surveyed and released respectively by 3 official authorities including the Bureau of Agricultural Economics under US Department of Agriculture, Bureau of Labor Statistics under US Department of Labor and the Census Bureau under US Department of Commerce, the agricultural population in the United States had a sharp decrease in 1910 – 1970, and the population structure had completed the transition from agricultural population to industrial population. But there are also some omissions in the official statistical data, mainly including the "agricultural service" workers, floating agricultural population, illegal immigrants and child laborers. These 4 kinds of labor force population that directly or indirectly engage in farm production are not included in the agricultural population of the United States. For the purpose of exaggerating agricultural labor productivity and covering up exploitation from the perspective of the official US authorities and due to limited statistical methods as well as complicated conditions, some data problems including great difference in agricultural population statistics and inaccurate absolute quantity have been caused.

Key words "Agricultural service" workers, Floating agricultural population, Illegal immigrants, Child laborers

1 Introduction

After various countries have entered into industrial age, the agricultural population that settles in the countryside and specializes in agricultural work has dropped rapidly with the development in technology and the gradual promotion of agricultural machinery. Among these countries, the United States has quite rapid decrease in agricultural population. In 1910, the agricultural population in the United States accounted for 35% of the total population. But during the 60 years from 1910 – 1970, both rural population and agricultural labor force had been reduced by over 65%. By the year 1970, the agricultural population in the United States had dropped to 5% of the total population. According to the declaration of the official authorities, the average number of people that can be supported by the products of each agricultural laborer was 7.07 persons in 1910, 10.7 people in 1940, 25.8 people in 1960, and increased to 47.1 people in 1970^[1]. For the sharp decrease of agricultural population in 1910 – 1970, the most intuitive material is the changes in the numbers released by the official authorities of the United States. Related data surveyed and duly released by the Bureau of Agricultural Economics under US Department of Agriculture, Bureau of Labor Statistics under US Department of Labor and the Census Bureau under US Department of Commerce reflects the fact of agricultural population decline and agricultural demographic transition. However, we believe that there are still some big problems in the official statistics of the United States. First, the "agricultural service" workers, floating agricultural population, illegal immigrants and child laborers in agricultural production are rarely included or not included in the official statistics at

all. Second, the main reasons for inaccurate official statistics include the purpose of exaggerating agricultural labor productivity and covering up exploitation together with limited statistical methods and complicated actual situations. In fact, for any countries including the United States, the structural adjustment of working population cannot be achieved overnight and requires a gradual process. In the academic circle, people tend to focus on the rapid industry & commerce development and economic strength growing of the United States in the industrial age. The problems related to agricultural development are rarely involved. There is hardly any specific academic information to analyze the problem related to the agricultural population statistics of the United States. We believe that the analysis of this problem has a practical significance for the clear understanding over the agricultural population shrinkage process and demographic transition in the United States.

2 Factors not included in official statistics

2.1 "Agricultural service" workers With the completion of the second industrial revolution, the United States had completed the transition from agricultural country to industrial country in the early 20th century. In 1900, the value of agricultural production accounted for 33% of the Gross National Product, but 60% of the labor force were engaged in non-agricultural work^[2]. At that time, the physical workers in the United States included white-collar workers, service workers and agricultural laborers. Among them, agricultural population had greatest changes. In 1900, agricultural population accounted for around 37.5% of the total work force. And by 1980, it had dropped to 2.7%^[3]. The rapid decrease of agricultural population is an unquestioned fact. However in the official statistics of the United States, the "agricultural service" workers that are closely linked to agriculture but not directly engaged in agricultural production are not included in the

agricultural population^[1]. On the contrary, these "agricultural service" workers are included in the industrial population, which has further deepened the impression that agriculture is replaced by industry rapidly.

Since 1910, with the industrial development, technological progress, transportation development and market expansion, the small-scale peasant economy dominated by traditional family-based agricultural production has faded out of US agricultural economic stage gradually, being replaced by plantation economy and the rise of agricultural companies. Since then, even if the agricultural labor force continued to engage in agriculture, they were not the original so-called peasants anymore. With modern scientific and technical means applied for agricultural and fishery production, they have become agricultural workers and farmers and usually live in small towns with completely different lifestyle^[4]. The physical farming method that "peasants work in the field all day long" and the semi-mechanized agricultural stage with horses as the main power have been eliminated. But it doesn't mean that there are no agricultural laborers in the fields anymore. As a matter of fact, apart from the farmers and the peasants who must work with traditional physical labor, "agricultural service" workers including machine operating workers, fertilizer spraying workers, irrigation system construction workers, insect disease prevention pharmacists, production material purchasing workers, agricultural products packing & transportation workers, farm accountants and cashiers *etc.* are all provided by specialized agricultural companies. Although these workers are closely linked to agricultural production or are engaged in agricultural production in a direct or indirect way, they are not included in the agricultural labor force, causing a significant reduction in statistical data.

2.2 Floating agricultural population In the industrial age, the industrial population statistics of each country is relatively stable and accurate, as the mobility of industrial population working in factories is relatively lower. Industrial production is fixed and regular with less outside influence. By comparison, agricultural production is deeply affected by seasons, climate, temperature and sunlight *etc.* Because of this, there are busy and slack farming seasons. Different from the factories with relatively stable number of hired workers, the number of work force hired in the farms has significant variations. It's very difficult to include the number of temporarily hired floating farm workers in the statistics. In the "busy farming season", all levels of farms hire a large number of floating agricultural workers temporarily; while in the slack season, the most basic labor force or only the farmer's family itself will be kept. A large floating agricultural population is going back and forth between cities and villages. During official survey, it's not possible to have all these workers working in the farms. As a result, the floating agricultural workers that are temporarily hired are rarely included in the statistics^[1]. This is related to the features of agricultural production itself, and is also related to the intentional neglect in the official statistical process of the United States.

Since 1910 when the United States entered the stage of agricultural mechanization gradually, plenty of agriculture surplus labor force has started to appear. Farmers have tried to reduce the production costs, for example by means of applying steam engines and new machines extensively. On the one hand, horses were replaced by these machines and were pushed out from the operation; on the other hand, seasonal agricultural laborers were dissociated, resulting in artificial surplus population and further causing wage reduction^[5]. A large number of surplus laborers were floating between villages and cities. Similar to peasant workers, they worked in the cities during the slack farming season and went back to the villages in the form of "seasonal agricultural laborers" in the busy farming season. For example in 1965, 81% of the cotton in the Mississippi Delta was harvested by machines. In 1940 – 1970, 4 million black people left from villages to cities for a living^[6]. But the capacity of the cities was limited, and there were not enough jobs for these rural black people with relatively low educational level. Therefore, they had to struggle for a living by working in the cities and also needed to go back to work in the farms during the busy farming season when agricultural labor force is required. This part of highly floating agricultural population is not included in the official agricultural population statistics of the United States, but is included in the industrial population or urban population. The shrinkage in the number of floating agricultural population has also resulted in the deviation of the agricultural population statistics in the United States.

2.3 Illegal immigrants In the official statistics of the United States, the usage of illegal immigrants is not included^[1]. It is well known that the United States is the world's largest country of immigrants. But in 1920s, due to excessive population growth rate and the mass panic for "foreigners and foreign philosophy", restrictive immigration policies were implemented. The *Emergency Quota Act for Immigration* and the *Nationality Source Act* were passed in 1921 and 1924 respectively to restrict immigration to the United States. Because of this, a lot of immigrants with the attempt to make a living in the United States had no choice but to apply some illegal ways. Although the quota of immigrants was increased in 1965, the number of people who wanted to immigrate to the United States still exceeded the upper limit. As there was no way to enter the United States in a legal way, a lot of people took the approach of illegal immigration. Mexico had the largest number of illegal immigrants that exceeded the total number of its legal immigrants^[7]. Illegal immigrants were not protected by law, but they still had to make a living with low payment. As a result, all levels of farmers hired as many illegal immigrants as possible to work for them with the lowest price, worst environment and maximum exploitation. As these illegal immigrants were not protected by the law of the United States, once being found by the official authorities, both the illegal immigrants and the farmers who hired them would be punished by law. Therefore, all levels of farmers must conceal the fact that illegal immigrants were working for them. These illegal immigrants would never be included in the official

statistics. Being far away from home in an unfamiliar environment, some of the legal immigrants also had to engage in agricultural production in the toughest environment to support the family. For example in the 1960s, the farm workers in Chicago protested against the feudal lord-manor working conditions. Most of them were Mexican immigrants who came to California and Southwest States to work and make a living^[6]. Immigrants have made great contribution to the development of the United States. But as illegal immigrants are unlawful with no social recognition nor official protection, they would not be included in the agricultural population of the United States.

2.4 Child laborers In the officially released statistics of the United States, the underage agricultural laborers that are illegally used and concealed by the farmers are not included in the statistics^[1]. Early on May 24, 1937, President Roosevelt pointed out that: "A self-reliant and self-respected democratic country has no reason to allow child laborers, nor economic reasons to cut the wages and extend the working time of workers"^[8]. But in the 1970s, before the welfare education service covering most of the population was promoted by the US Government, a large number of poor families could not afford the educational expenses or even the living expenses of the children. They had no choice but to allow the underage children to go out and work for money. This was especially prominent among ordinary peasant households in the rural area. According to the law of the United States, employing child laborers was illegal. But for all levels of farmers, hiring underage workers from peasant households with low wages was a very good deal. Child laborers had extremely low remuneration, but their labor intensity and working environment had no difference from that of the adult workers. Because of this, underage workers illegally used by all levels of farms could be found everywhere, and the farmers would never report this data actively.

On the other hand, there were also some loopholes in the law of the United States on forbidding the use of child laborers at that time. For example in the *Fair Labor Standards Act* that was developed in 1938 and revised in 1949, in order to protect child laborers, it was prescribed that the age of employment for the posts without high risks must be over 16 years old, and the age of employment for high-risk posts must be over 18 years old. However, for the agricultural work without risks, the minimum age limit was not defined. Taking advantage of the legal loopholes, all levels of farmers hired a large number of child laborers but concealed this information from the official authorities. In 1971, around 800 000 child laborers under the age of 16 were not included in the official statistics of the United States^[1].

3 Reasons for the problems in statistical data

In 1910 – 1970, the trend of agricultural population decline was an objective fact in the United States, and the transition process of agricultural population was also completed during this period of time. But it's also true that there were some problems in the agricultural population statistics and some ratio deviation had been

caused. Generally speaking, around the year 1970, the number of floating agricultural workers, child laborers and "agricultural service" workers not included in the official statistics of the United States amounted to about 2 million^[1]. The official statistics of the United States exaggerated the gradual decreasing trend of rural population and agricultural labor force population. That is to say, the speed and degree of reduction was exaggerated. The reasons for this mainly include 4 aspects as follows.

3.1 Exaggerating the agricultural labor productivity of the United States By means of reducing the agricultural labor force, the labor productivity level and agricultural product quantity of unit agricultural population could be exaggerated. In especial, the output of each agricultural laborer could be exaggerated according to the ratio of agricultural population to the total population. For example according to the population ratio officially released by the United States, the labor of every 8 peasants could support the grain demand of 10 people in 1800; in 1970, the labor output of each agricultural laborer could support nearly 50 people; and in 1980, each peasant could provide enough grain to support 60 people. Due to the problems in the agricultural population statistics, there must be some deviation in this ratio.

3.2 Covering up the exploitation in the agricultural production of the United States In the statistical data, the number of floating agricultural population, illegal immigrants and child laborers were reduced or not included. This can help to weaken the exploitation on wage laborers and the illegality in the production. In special, illegal immigrants and child laborers involve not only agricultural production, but also more importantly the legal sanctity and law enforcement. This is even related to the image of a country. Because of this, the official authorities of the United States have neglected these problems either intentionally or unintentionally.

3.3 Limitations of statistical method After entering the age of industrial civilization, the definition boundary between workers and peasants has become increasingly fuzzy. Especially for peasant workers, there is no unified understanding over the classification of them in the statistics. Therefore, for the people who actually provide agricultural services but are not classified as agricultural wage workers, it would be a data problem due to limitations of statistical method if they are not included in the statistical data of US agricultural population.

3.4 Mobility of agricultural population and complicated flowing conditions After coming into the information age, the population mobility has been increased. The laborers have to run around to work for a living, and the work they do is also flexible. With the job changes, the laborers flow between villages and cities and between agriculture and industry. Together with the limited time for official statistics, the objective reasons for the variation and inaccuracy in the agricultural population statistics have formed.

4 Conclusions

Just as Lenin said: when capitalism has developed to a certain st-

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tem. Firstly, setting up information file. Service center may carry out survey on health conditions of rural people older than 60 and establish rural elderly information file. Secondly, establishing contact system. Members of service center should regularly contact disabled elderly and care about physical and psychological conditions of the elderly through interview and visit.

6 Conclusions and discussions

Family is the basic guarantee for the elderly endowment. However, with transformation of economy and society and living style, the whole society is facing with the problem of weakening family endowment functions, and such problem is particularly outstanding in G Town in South Shaanxi. Family endowment needs joint effort of public services and children affection. (i) Local government should undertake the responsibility of providing social welfare, improving community endowment facilities, implementing financial subsidy policy of public welfare endowment, and promote construction of socialized endowment organizations with positive policies. (ii) Communities should strengthen public medical care services and focus on solving problems of endowment and medical care. (iii) It is recommended to encourage non-profit organizations to actively participate in care and services of rural elderly, especially students of colleges and universities, volunteer organizations, elderly teams, and strengthen management and innovation in service type and service system, to provide spiritual consolation

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age, that is when national agriculture is organized completely according to the form of capitalism and machines are widely used in various agricultural operations, the absolute number of agricultural wage workers will definitely be reduced, which is different from that of industrial workers^[9]. In the United States, the number of agricultural population has been declining since 1850. In 1850, agricultural population accounted for 89% of the total population in the United States, and reduced to 72% in 1880^[10], and further dropped to only 4.6% in 1972. But the problems in the officially released agricultural population statistics indicate that the number and speed of agricultural population reduction have been exaggerated considerably and cannot truly reflect the structure change of agricultural population in the United States. For any countries including the United States, the structural adjustment of working population cannot be achieved overnight and requires a gradual process. In 1910 – 1970, the United States completed the transition from agricultural population to industrial population and from rural population to urban population. On the one hand, it reflects the powerful industrial, commercial, service and financial strengths of the modern United States; while on the other hand that is far beyond the official data, agricultural workers that are closely related to agriculture have provided the strongest material assurance for the economic

and family love. (iv) It is recommended to make effort to promote "simulated family" mode. Volunteers and the elderly establish relatively fixed families. Through effectively consolidating social kindness resources, it is expected to integrate nurses, volunteers, family members, and the elderly, to establish a new endowment mode with "family love service" as basic principle and "happy endowment" as the objective.

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development and social stability, and have made outstanding contributions to the agricultural hegemony of the United States in the world.

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